



NEXCOM International Co., Ltd.

Multi-Media Solutions
Digital Signage Platform
NDiS 162
User Manual

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PREFACE

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Disclaimer

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Acknowledgements

NDiS 162 is a trademark of NEXCOM International Co., Ltd. All other product names mentioned herein are registered trademarks of their respective owners.

Regulatory Compliance Statements

This section provides the FCC compliance statement for Class A devices and describes how to keep the system CE compliant.

Declaration of Conformity

FCC

This equipment has been tested and verified to comply with the limits for a Class A digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area (domestic environment) is likely to cause harmful interference, in which case the user will be required to correct the interference (take adequate measures) at their own expense.

CE

The product(s) described in this manual complies with all applicable European Union (CE) directives if it has a CE marking. For computer systems to remain CE compliant, only CE-compliant parts may be used. Maintaining CE compliance also requires proper cable and cabling techniques.

RoHS Compliance



NEXCOM RoHS Environmental Policy and Status Update

NEXCOM is a global citizen for building the digital infrastructure. We are committed to providing green products and services, which are compliant with European Union RoHS (Restriction on Use of Hazardous Substance in Electronic Equipment) directive 2002/95/EU, to be your trusted green partner and to protect our environment.

RoHS restricts the use of Lead (Pb) < 0.1% or 1,000ppm, Mercury (Hg) < 0.1% or 1,000ppm, Cadmium (Cd) < 0.01% or 100ppm, Hexavalent Chromium (Cr6+) < 0.1% or 1,000ppm, Polybrominated biphenyls (PBB) < 0.1% or 1,000ppm, and Polybrominated diphenyl Ethers (PBDE) < 0.1% or 1,000ppm.

In order to meet the RoHS compliant directives, NEXCOM has established an engineering and manufacturing task force in to implement the introduction of green products. The task force will ensure that we follow the standard NEXCOM development procedure and that all the new RoHS components and new manufacturing processes maintain the highest industry quality levels for which NEXCOM are renowned.

The model selection criteria will be based on market demand. Vendors and suppliers will ensure that all designed components will be RoHS compliant.

How to recognize NEXCOM RoHS Products?

For existing products where there are non-RoHS and RoHS versions, the suffix "(LF)" will be added to the compliant product name.

All new product models launched after January 2006 will be RoHS compliant. They will use the usual NEXCOM naming convention.

Warranty and RMA

NEXCOM Warranty Period

NEXCOM manufactures products that are new or equivalent to new in accordance with industry standard. NEXCOM warrants that products will be free from defect in material and workmanship for 2 years, beginning on the date of invoice by NEXCOM. HCP series products (Blade Server) which are manufactured by NEXCOM are covered by a three year warranty period.

NEXCOM Return Merchandise Authorization (RMA)

- ✘ Customers shall enclose the “NEXCOM RMA Service Form” with the returned packages.
- ✘ Customers must collect all the information about the problems encountered and note anything abnormal or, print out any on-screen messages, and describe the problems on the “NEXCOM RMA Service Form” for the RMA number apply process.
- ✘ Customers can send back the faulty products with or without accessories (manuals, cable, etc.) and any components from the card, such as CPU and RAM. If the components were suspected as part of the problems, please note clearly which components are included. Otherwise, NEXCOM is not responsible for the devices/parts.
- ✘ Customers are responsible for the safe packaging of defective products, making sure it is durable enough to be resistant against further damage and deterioration during transportation. In case of damages occurred during transportation, the repair is treated as “Out of Warranty.”

- ✘ Any products returned by NEXCOM to other locations besides the customers’ site will bear an extra charge and will be billed to the customer.

Repair Service Charges for Out-of-Warranty Products

NEXCOM will charge for out-of-warranty products in two categories, one is basic diagnostic fee and another is component (product) fee.

System Level

- ✘ Component fee: NEXCOM will only charge for main components such as SMD chip, BGA chip, etc. Passive components will be repaired for free, ex: resistor, capacitor.
- ✘ Items will be replaced with NEXCOM products if the original one cannot be repaired. Ex: motherboard, power supply, etc.
- ✘ Replace with 3rd party products if needed.
- ✘ If RMA goods can not be repaired, NEXCOM will return it to the customer without any charge.

Board Level

- ✘ Component fee: NEXCOM will only charge for main components, such as SMD chip, BGA chip, etc. Passive components will be repaired for free, ex: resistors, capacitors.
- ✘ If RMA goods can not be repaired, NEXCOM will return it to the customer without any charge.

Warnings

Read and adhere to all warnings, cautions, and notices in this guide and the documentation supplied with the chassis, power supply, and accessory modules. If the instructions for the chassis and power supply are inconsistent with these instructions or the instructions for accessory modules, contact the supplier to find out how you can ensure that your computer meets safety and regulatory requirements.

Cautions

Electrostatic discharge (ESD) can damage system components. Do the described procedures only at an ESD workstation. If no such station is available, you can provide some ESD protection by wearing an antistatic wrist strap and attaching it to a metal part of the computer chassis.

Safety Information

Before installing and using the device, note the following precautions:

- Read all instructions carefully.
- Do not place the unit on an unstable surface, cart, or stand.
- Follow all warnings and cautions in this manual.
- When replacing parts, ensure that your service technician uses parts specified by the manufacturer.
- Avoid using the system near water, in direct sunlight, or near a heating device.
- The load of the system unit does not solely rely for support from the rackmounts located on the sides. Firm support from the bottom is highly necessary in order to provide balance stability.
- The computer is provided with a battery-powered real-time clock circuit. There is a danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

Installation Recommendations

Ensure you have a stable, clean working environment. Dust and dirt can get into components and cause a malfunction. Use containers to keep small components separated.

Adequate lighting and proper tools can prevent you from accidentally damaging the internal components. Most of the procedures that follow require only a few simple tools, including the following:

- A Philips screwdriver
- A flat-tipped screwdriver
- A grounding strap
- An anti-static pad

Using your fingers can disconnect most of the connections. It is recommended that you do not use needlenose pliers to disconnect connections as these can damage the soft metal or plastic parts of the connectors.

Safety Precautions

1. Read these safety instructions carefully.
2. Keep this User Manual for later reference.
3. Disconnect this equipment from any AC outlet before cleaning. Use a damp cloth. Do not use liquid or spray detergents for cleaning.
4. For plug-in equipment, the power outlet socket must be located near the equipment and must be easily accessible.
5. Keep this equipment away from humidity.
6. Put this equipment on a stable surface during installation. Dropping it or letting it fall may cause damage.
7. Do not leave this equipment in either an unconditioned environment or in a above 40°C storage temperature as this may damage the equipment.
8. The openings on the enclosure are for air convection to protect the equipment from overheating. DO NOT COVER THE OPENINGS.
9. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
10. Place the power cord in a way so that people will not step on it. Do not place anything on top of the power cord. Use a power cord that has been approved for use with the product and that it matches the voltage and current marked on the product's electrical range label. The voltage and current rating of the cord must be greater than the voltage and current rating marked on the product.
11. All cautions and warnings on the equipment should be noted.
12. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient overvoltage.
13. Never pour any liquid into an opening. This may cause fire or electrical shock.
14. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.
15. If one of the following situations arises, get the equipment checked by service personnel:
 - a. The power cord or plug is damaged.
 - b. Liquid has penetrated into the equipment.
 - c. The equipment has been exposed to moisture.
 - d. The equipment does not work well, or you cannot get it to work according to the user's manual.
 - e. The equipment has been dropped and damaged.
 - f. The equipment has obvious signs of breakage.
16. Do not place heavy objects on the equipment.
17. The unit uses a three-wire ground cable which is equipped with a third pin to ground the unit and prevent electric shock. Do not defeat the purpose of this pin. If your outlet does not support this kind of plug, contact your electrician to replace your obsolete outlet.
18. CAUTION: DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY REPLACED. REPLACE ONLY WITH THE SAME OR EQUIVALENT TYPE RECOMMENDED BY THE MANUFACTURER. DISCARD USED BATTERIES ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.
19. The computer is provided with CD drives that comply with the appropriate safety standards including IEC 60825.

Technical Support and Assistance

1. For the most updated information of NEXCOM products, visit NEXCOM's website at www.nexcom.com.
2. For technical issues that require contacting our technical support team or sales representative, please have the following information ready before calling:
 - Product name and serial number
 - Detailed information of the peripheral devices
 - Detailed information of the installed software (operating system, version, application software, etc.)
 - A complete description of the problem
 - The exact wordings of the error messages

Warning!

1. Handling the unit: carry the unit with both hands and handle it with care.
2. Maintenance: to keep the unit clean, use only approved cleaning products or clean with a dry cloth.
3. CompactFlash: Turn off the unit's power before inserting or removing a CompactFlash storage card.

Conventions Used in this Manual



Warning: Information about certain situations, which if not observed, can cause personal injury. This will prevent injury to yourself when performing a task.



Caution: Information to avoid damaging components or losing data.



Note: Provides additional information to complete a task easily.

Global Service Contact Information

Headquarters

Taiwan

18F, No. 716, Chung-Cheng Rd. Chung-Ho City,
Taipei County 235, Taiwan, R.O.C.
Tel: +886-2-8228-0606
Fax: +886-2-8228-0501
<http://www.nexcom.com.tw>

USA

3758 Spinnaker Court,
Fremont, CA 94538, USA
Tel: +1-510-656-2248
Fax: +1-510-656-2158
<http://www.nexcom.com>

France

Z.I. des Amandiers, 17, Rue des entrepreneurs
78420 Carrières sur Seine, France
Tel: +33 (0)1 71 51 10 20
Fax: +33 (0)1 71 51 10 21
<http://www.nexcom.eu>

Germany

Leopoldstraße Business Centre, Leopoldstraße 244 80807
Munich, Germany
Tel: +49-89-208039-278
Fax: +49-89-208039-279
<http://www.nexcom.eu>

Italy

Via Gaudenzio Ferrari 29, 21047 Saronno (VA) Italia
Tel: +39 02 9628 0333
Fax: +39 02 9619 8846
<http://www.nexcom.eu>

United Kingdom

10 Vincent Avenue, Crownhill Business Centre
Milton Keynes, Buckinghamshire, MK8 0AB
United Kingdom
Tel: +44-1908-267121
Fax: +44-1908-262042
<http://www.nexcom.eu>

China-Beijing

Room 301, Block E, Power Creative Building, No. 1
Shangdi East Rd. Haidian Dist., Beijing, 100085, China
Tel: +86-10-5885-6655
Fax: +86-10-5885-1066
<http://www.nexcom.cn>

China-Shanghai Office

Room 1505, Greenland He Chuang Building, No. 450
Caoyang Rd. Shanghai, 200063, China
Tel: +86-21-6150-8008
Fax: +86-21-3251-6358
<http://www.nexcom.cn>

China-Nanjing Office

Hall C, Block 17, TianXingCuiLang,
No. 49 Yunnan North Rd. Nanjing, 210018, China
Tel: +86-25-8315-3486
Fax: +86-25-8315-3489
<http://www.nexcom.cn>

China-Shenzhen Office

Western Room 708, Block 210, Tairan Industry & Trading Place,
Futian Area, Shenzhen, China 518040
TEL: +86-755-833 27203
FAX: +86-755-833 27213
<http://www.nexcom.cn>

Japan

9F, Tamachi Hara Bldg.,
4-11-5, Shiba Minato-ku Tokyo,
Japan 108-0014
Tel: +81-3-5419-7830
Fax: +81-3-5419-7832
<http://www.nexcom-jp.com>

PACKAGE CONTENTS

Before continuing, verify that the NDiS 162 package that you received is complete. Your NDiS 162 package should have all the items listed in the following table.

Item	P/N	Name	Specification	Qty
1	6012200053X00	PE ZIPPER BAG #3	100x70mm,W/China RoHS SYMBOL	1
2	6012200052X00	PE ZIPPER BAG #8	170x240mm,W/China RoHS SYMBOL	1
3	50311F0100X00	ROUND HEAD SCREW W/SPRING+FLAT WASHER LONG FEI:P3x6L	P3x6 iso/SW6x0.5 NI	4
4	60177A0121X00	(N)NEX662 QUICK REFERENCE GUIDE VER:A	KRAMER	1
5	602DCD0148X00	(N)NEX662 CD DRIVER VER:1.0		1
6	5060600049X00	2.5 HDD MYLAR NORMARK:DA-P3B01-569001	96.2x70x0.1mm	1
7	5043330226X00	NDiS162 HDD BRACKET CHYUAN JYH:L10Z334	119x72.05x9.8mm SPCC T=1.0mm NI	1
8	50311F0095X00	FLAT HEAD SCREW LONG FEI:F6#32Tx5 NYLOK NIGP	F6#32Tx5 NI NYLOK	4
9	60233ATA12X00	(N)SATA CABLE FOR NISE 1000 BEST	26AWG L:150mm	1
10	7400060002X00	POWER ADAPTER FSP:FSP060-1AD101C(N09001)	60W MINI DIN 4PIN W/LOCK 12V/5A	1
11	50344C0034X00	COPPER POST LONG FEI:COPPER POSTS 6.5x5xM3	WITH MALE/FEMALE (FEMALE)6.5mmx(MALE)5mmxM3	3

ORDERING INFORMATION

The following provides ordering information for NDiS 162.

- **NDiS 162 (P/N: 10W00016200X0)**
 - AMD Athlon™ 64/64 X2 Fan-less Barebone System
 - AMD 690E/SB600 with CRT/DVI x2

CHAPTER 1: PRODUCT INTRODUCTION

Overview of NDiS 162



NDiS 162 is designed for Digital Signage application. It provides ease of mounting the system behind large-size display devices such as LCD TV or PDP.

NDiS 162 operates on AMD low power Athlon™ 64/64 X2 series processors. With its fan-less thermal design, it can reduce maintenance cost and thus guarantees stability on 24/7 nonstop operation.

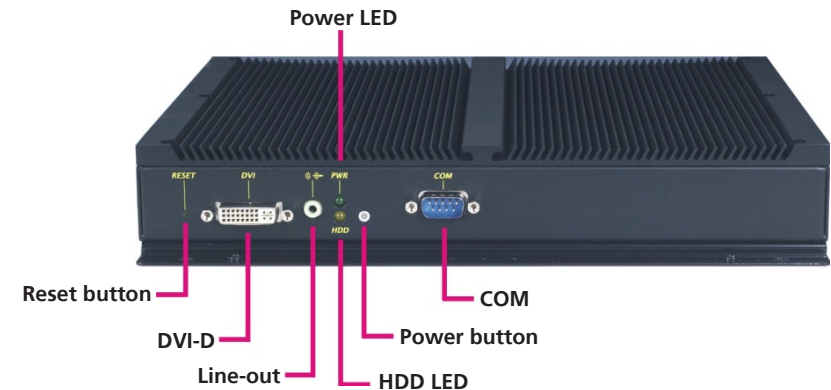
NDiS 162 provides dual DVI display interface with dual independent audio output, one GbE Ethernet with optional wireless connectivity, USB 2.0 ports and a 2.5" drive bay for a storage device.

Key Features

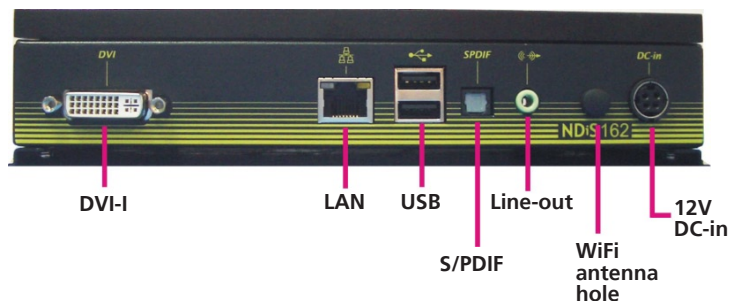
- Powerful Digital Signage Player with AMD Athlon™ 64/64 X2 AM2 processor
- Fan-less thermal design
- AMD 690E/SB600 solution
- DVI / VGA / u-DOC / Audio / S/PDIF / GbE LAN / USB
- +12V DC-in / ATX support
- 1 x SATA 2.5" HDD / CF (optional)

Physical Features

Front panel



Side panel



Hardware Specifications

Main Board (NEX 662)

- AMD AM2 socket
- Supports Athlon™ 64/64 X2 series processor
- AMD embedded processor list (AMD Longevity CPU)
 - Athlon™ 64 X2 3400E (FANLESS)
 - Athlon™ 64 3100+ (FANLESS)
 - Athlon™ 64 2600+ (FANLESS)
 - Athlon™ 64 2000+ (FANLESS)

Chipset

- AMD M690E/M690T, AMD SB600
- Integrated ATI X1270 graphic controller

Main Memory

- One 25° angled DIMM socket
- Supports DDR2 800MHz SDRAM with unbuffered and non-ECC memory module
- Supports up to 2GB memory

I/O Interface - Front

- DB9 port x1 for RS232
- Power-on LED x1
- HDD LED x1
- DVI-D x1
- Phone jack x1 for line-out
- ATX Power-on button x1
- Reset button x1

I/O Interface - Side

- DVI-I x1 for CRT and DVI-D
- RJ45 with LED x1 for 10/100/1000Mbps Ethernet
- USB x2
- S/PDIF x1
- Phone jack x1 for line-out
- +12V DC-in power x1
- Antenna for WiFi x1 (optional)

Storage

- SATA 2.5" HDD storage x1
- u-DOC x1
- CF type I/II x1 (optional)

Expansion Slot

- 1 mini PCIe slot for optional wireless module

Dimensions

- W: 280mm; D: 210mm; H: 40.4mm (without rackmount bracket)

Construction

- Top cover made of aluminum for heat dissipation
- Chassis made of steel - in black

Power Input

- External 80W AC/DC adapter x1
- AC-in: 100~240VAC
- DC-out: DC +12V

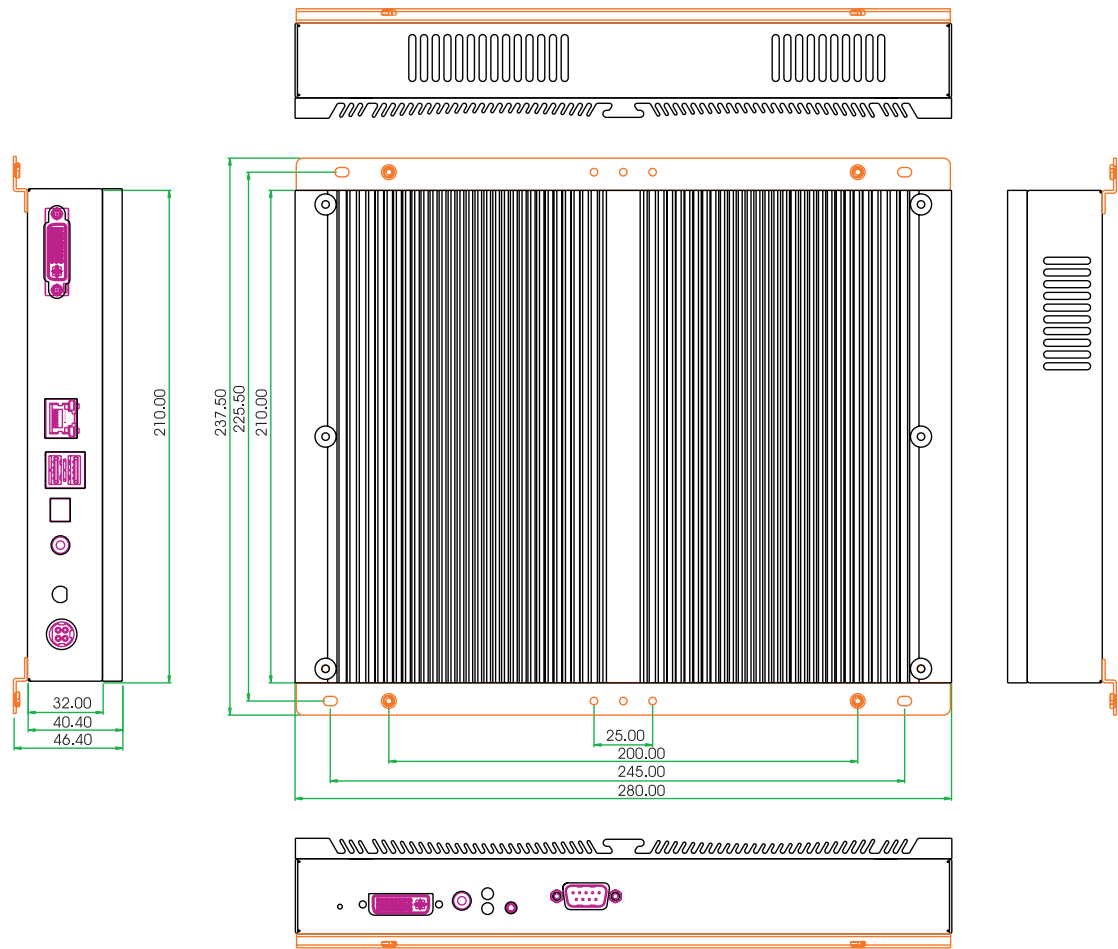
Environment

- Operating temperature: Ambient with airflow from 0°C ~ 40°C (HDD inside)
- Storage temperature: -20°C ~ 60°C, Humidity: 10% ~ 90% (non-condensing)

Certification

- CE approval
- FCC

Mechanical Dimensions



CHAPTER 2: JUMPERS AND CONNECTORS

This chapter describes how to set the jumpers on the motherboard. Note that the following procedures are generic for all NDiS 162 series.

Before You Begin

- Ensure you have a stable, clean working environment. Dust and dirt can get into components and cause a malfunction. Use containers to keep small components separated.
- Adequate lighting and proper tools can prevent you from accidentally damaging the internal components. Most of the procedures that follow require only a few simple tools, including the following:
 - A Philips screwdriver
 - A flat-tipped screwdriver
 - A set of jewelers Screwdrivers
 - A grounding strap
 - An anti-static pad
- Using your fingers can disconnect most of the connections. It is recommended that you do not use needle-nosed pliers to disconnect connections as these can damage the soft metal or plastic parts of the connectors.
- Before working on internal components, make sure that the power is off. Ground yourself before touching any internal components, by touching a metal object. Static electricity can damage many of the elec-

tronic components. Humid environment tend to have less static electricity than dry environments. A grounding strap is warranted whenever danger of static electricity exists.

Precautions

Computer components and electronic circuit boards can be damaged by discharges of static electricity. Working on the computers that are still connected to a power supply can be extremely dangerous.

Follow the guidelines below to avoid damage to your computer or yourself:

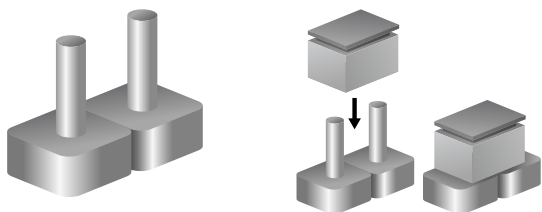
- Always disconnect the unit from the power outlet whenever you are working inside the case.
- If possible, wear a grounded wrist strap when you are working inside the computer case. Alternatively, discharge any static electricity by touching the bare metal chassis of the unit case, or the bare metal body of any other grounded appliance.
- Hold electronic circuit boards by the edges only. Do not touch the components on the board unless it is necessary to do so. Don't flex or stress the circuit board.
- Leave all components inside the static-proof packaging that they shipped with until they are ready for installation.
- Use correct screws and do not over tighten screws.

Jumper Settings

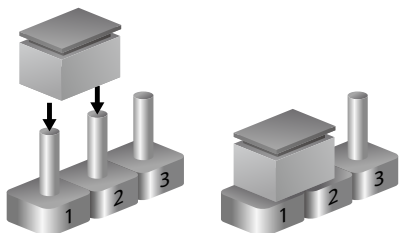
A jumper is the simplest kind of electric switch. It consists of two metal pins and a cap. When setting the jumpers, ensure that the jumper caps are placed on the correct pins. When the jumper cap is placed on both pins, the jumper is **short**. If you remove the jumper cap, or place the jumper cap on just one pin, the jumper is **open**.

Refer to the illustrations below for examples of what the 2-pin and 3-pin jumpers look like when they are short (on) and open (off).

Two-Pin Jumpers: Open (Left) and Short (Right)



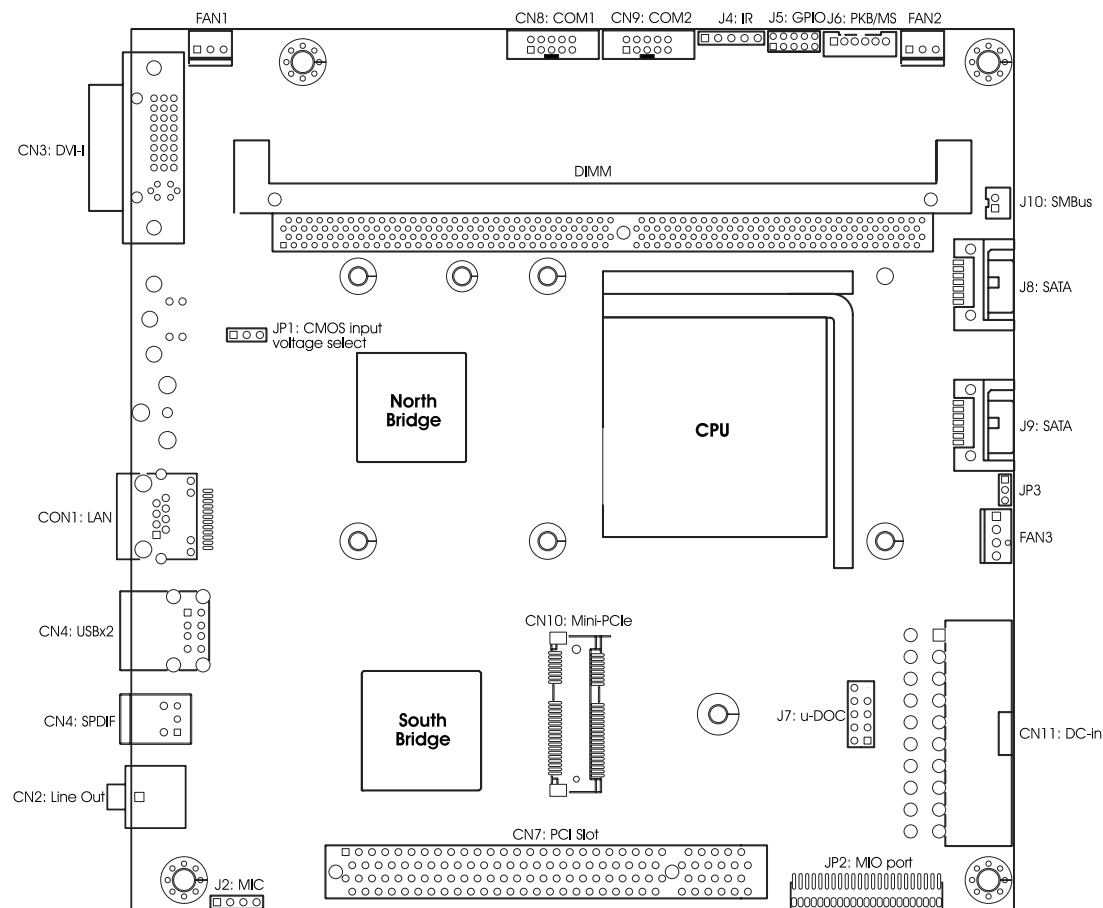
Three-Pin Jumpers: Pins 1 and 2 Are Short



Locations of the Jumpers and Connectors

NEX 662

The figure on the right is the NEX 662 motherboard which is the motherboard used in the NDiS 162 system. It shows the locations of the jumpers and connectors.



Pin Definitions

This section provides descriptions, illustrations and pin definitions of the jumpers and connectors.

DVI / VGA Port

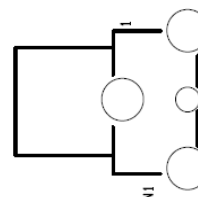
CN3



Pin	Definition	Pin	Definition
1	DVI_TX2N	2	DVI_TX2P
3	DVI_GND	4	DVI_TX4N
5	DVI_TX4P	6	CRT_CLK
7	CRT_DATA	8	CRT_VSYNC
9	DVI_TX1N	10	DVI_TX1P
11	DVI_GND	12	DVI_TX3N
13	DVI_TX3P	14	DVI_5V
15	GND	16	DVI_HPD
17	DVI_TX0N	18	DVI_TX0P
19	DVI_GND	20	DVI_TX5N
21	DVI_TX5P	22	DVI_GND
23	DVI_CLKP	24	DVI_CLKN
C1	MRED	C2	MGREEN
C3	MBLUE	C4	CRT_HSYNC
C5A	VGA_GND	C5B	VGA_GND

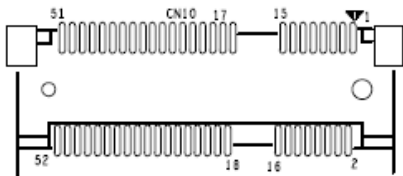
TV-Out Jack

CN1



Pin	Definition	Pin	Definition
1	GND_TV_CAS	2	CP-Pb

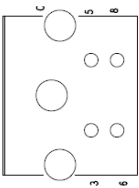
Mini PCI Slot
CN10



Pin	Definition	Pin	Definition
1	WAKE0#	2	+V3.3_MINI
3	NC	4	GND
5	NC	6	+1.5S_MINI
7	PCIE_MINI_CLKREQ#1	8	NC
9	GND	10	NC
11	GPP_CLK1_N	12	NC
13	GPP_CLK1_P	14	NC
15	GND	16	NC
17	NC	18	GND
19	NC	20	MINICARD1_DIS#
21	GND	22	PCIE_RST#
23	PCIE_RX1-	24	+V3.3A_MINI
25	PCIE_RX1+	26	GND
27	GND	28	+V1.5S_MINI
29	GND	30	SMB1_CLK
31	PCIE_TX1-	32	SMB1_DAT

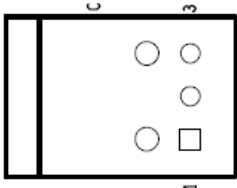
Pin	Definition	Pin	Definition
33	PCIE_TX1+	34	GND
35	GND	36	USB_6N_L
37	GND	38	USB_6P_L
39	+V3.3A_MINI	40	GND
41	+V3.3A_MINI	42	NC
43	GND	44	LED_WLAN_N
45	NC	46	NC
47	NC	48	+V1.5S_MINI
49	NC	50	GND
51	NC	52	+V3.3A_MINI

S-Video Port
CN6



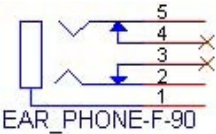
Pin	Definition	Pin	Definition
1	NA	2	NA
3	GND_TV	4	NA
5	GND_TV	6	CP-Pr
7	NA	8	CP-Y

S/PDIF Port
CN4



Pin	Definition	Pin	Definition
1	GND	2	VCC
3	SPDIF_OUT_R		

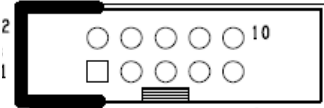
Audio-Out
CN2



Pin	Definition	Pin	Definition
1	GND	2	LOUT_R3
3	NC	4	NC
5	LOUT_L3		

RS232 Connector: COM1, COM2

Connector size: 2 x 10 = 20 Pins Box Header, (2.0 mm Pitch)
Connector location: COM1 (CN9), COM2 (CN8)



Pin	Definition	Pin	Definition
1	SP_DCD_A	2	SP_RXD_A
3	SP_TXD_A	4	SP_DTR_A
5	GND	6	SP_DSR_A
7	SP_RTS_A	8	SP_CTS_A
9	SP_RI_A	10	CON_GND

LAN

Connector size: RJ-45

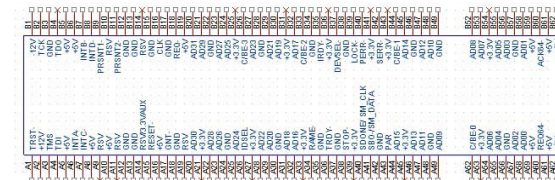
Connector location: CN5



Pin	Definition	Pin	Definition
1	LAN_TXD0P	2	LAN_TXD0N
3	LAN_TXD1P	4	LAN_TXD2P
5	LAN_TXD2N	6	LAN_TXD1N
7	LAN_TXD3P	8	LAN_TXD3N
9	LAN_ACTLED#	10	LAN_LED1+
11	LAN_LED2-	12	LAN_LED2+

PCI Slot

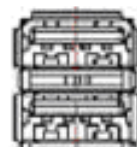
CN7



Definition					
PIN	A	B	PIN	A	B
1	TRST#	-12V_ATX	32	AD16	AD17
2	+12V_ATX	TCK	33	+3.3V_ATX	C/BE2#
3	TMS	GND	34	FRAME#	GND
4	TDI	TDO	35	GND	IRDY#
5	+5V_ATX	+5V_ATX	36	TRDY#	+3.3V_ATX
6	INTA#	+5V_ATX	37	GND	DEVSEL#
7	INTC#	INTB#	38	STOP#	GND
8	+5V_ATX	INTD#	39	+3.3V_ATX	LOCK#
9	RSV1	PRSENT1#	40	SMBCLK	PERR#
10	+3.3V_ATX	RSV5	41	SMBDAT	+3.3V_ATX
11	RSV2	PRSENT2#	42	GND	SERR#
12	GND	GND	43	PAR	+3.3V_ATX

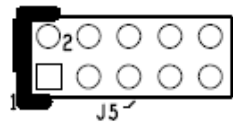
Definition					
PIN	A	B	PIN	A	B
13	GND	GND	44	AD15	C/BE1#
14	+VCC3P3V_ ALW	RSV6	45	+3.3V_ATX	AD14
15	RST#	GRPIMD	46	AD13	GND
16	+5V_ATX	CLK	47	AD11	AD12
17	GNT#	GND	48	GND	AD10
18	GND	REQ#	49	AD9	GND
19	PME#	+5V_ATX	CONNEC- TOR KEY		
20	AD30	AD31			
21	+3.3V_ATX	AD29			
22	AD28	GND	52	C/BE0#	AD8
23	AD26	AD27	53	+3.3V_ATX	AD7
24	GND	AD25	54	AD6	+3.3V
25	AD24	+3.3V_ATX	55	AD4	AD5
26	IDSEL	C/BE2#	56	GND	AD3
27	+3.3V_ATX	AD23	57	AD2	GND
28	AD22	GND	58	AD0	AD1
29	AD20	AD21	59	+3.3V_ATX	+5V_ATX
30	GND	AD19	60	REQ64#	ACK64#
31	AD18	+3.3V_ATX	61	+5V_ATX	+5V_ATX
			62	+5V_ATX	+5V_ATX

USB CON1



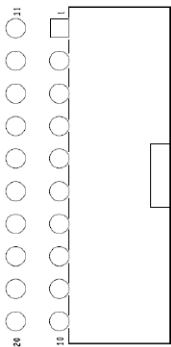
Pin	Definition	Pin	Definition
1	USB0_VCC	2	USB_0#
3	USB_0	4	U1_GND
5	USB0_VCC	6	USB_1#
7	USB_1	8	U1_GND

GPIO
J5



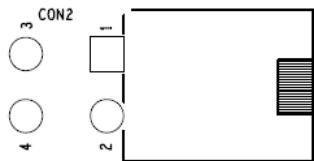
Pin	Definition	Pin	Definition
1	+5V_ATX	2	GND
3	GP23	4	GP32
5	GP22	6	GP31
7	GP21	8	GP30
9	GP20	10	GP24

DC Power Input
CN11



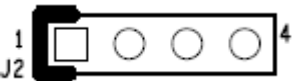
Pin	Definition	Pin	Definition
1	+3.3V_ATX	2	+3.3V_ATX
3	GND	4	+5V_ATX
5	GND	6	+5V_ATX
7	GND	8	SYS_PWRGD
9	+5VALW_ATX	10	+12V_ATX
11	+3.3V_ATX	12	-12V_ATX
13	GND	14	ATX_PSON
15	GND	16	GND
17	GND	18	NC
19	+5V_ATX	20	+5V_ATX

DC Power
CON2



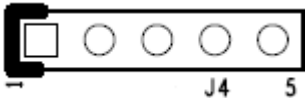
Pin	Definition	Pin	Definition
1	GND	2	GND
3	+12V_ATX	4	+12V_ATX

MIC
J2



Pin	Definition	Pin	Definition
1	MIC1_L3	2	AGND
3	NC	4	MIC1_R3

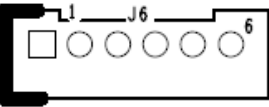
IR
J4



Pin	Definition	Pin	Definition
1	+5V_ATX	2	CIRRX
3	IR_RX	4	GND
5	IR_TX		

Keyboard/Mouse

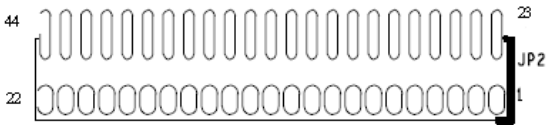
J6



Pin No.	Description	Pin No.	Description
1	K/M_VCC	2	LKBDAT
3	LKBCLK	4	LMDAT
5	LMCLK	6	KBGND

DVI-I Connector and Miscellaneous Signals

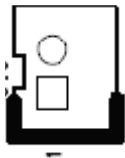
JP2



Pin	Definition	Pin	Definition
1	GFX_TX2N	2	GFX_TX2P
3	GND	4	GFX_TX1N
5	GFX_TX1P	6	GND
7	GFX_TX4N	8	GFX_TX4P
9	GND	10	GFX_TX6N
11	GFX_TX6P	12	DVI_5V
13	DVI2_HPD	14	MASTER_RST#
15	PWRBT_SW	16	PWR_LED_P
17	HD_LED_P	18	+5V_ATX
19	GND	20	LINE1_OUT_L
21	+5VALW_ATX	22	LED_WLAN_P
23	GFX_TX0N	24	GFX_TX0P
25	GND	26	GFX_TX5N
27	GFX_TX5P	28	GND
29	GFX_TX3N	30	GFX_TX3P
31	GND	32	DVI_CLK
33	DVI_DATA	34	GND
35	GND	36	GND

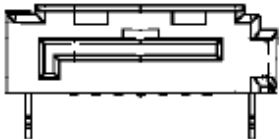
Pin	Definition	Pin	Definition
37	GND	38	PWR_LED_N
39	HD_LED_N	40	+3.3V_ATX
41	GND	42	LINE1_OUT_R
43	+3.3V_ATX	44	LED_WLAN_N

SMB
J1



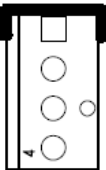
Pin	Definition	Pin	Definition
1	SMB0_CLK	2	SMB0_DAT

SATA
J8, J9



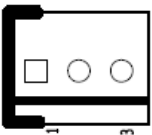
Pin	Definition
1	GND
2	TXP
3	TXN
4	GND
5	RXN
6	RXP
7	GND

Fan Connector
FAN3



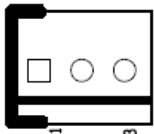
Pin	Definition	Pin	Definition
1	GND	2	+12V_ATX
3	SB600_FANTACH0	4	SB600_FANOUT_R

Fan Connector
FAN2



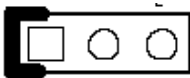
Pin	Definition	Pin	Definition
1	GND	2	+12V_ATX
3	SB600_FANTACH2		

Fan Connector
FAN1



Pin	Definition	Pin	Definition
1	GND	2	+12V_ATX
3	SB600_FANTACH1		

CMOS Input Voltage Select
JP1



Pin No.	Status	Function Description
1-2	Short*	VBAT IN
2-3	Short	Clear CMOS

MIO02 Module

Specifications

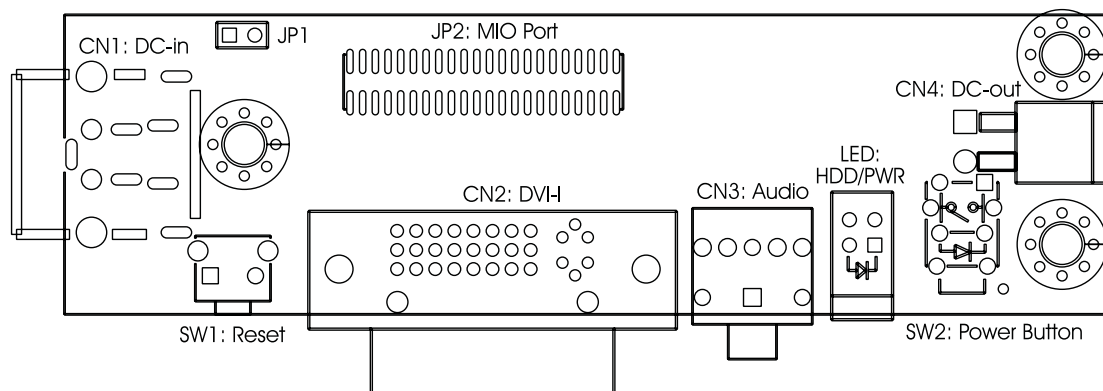
I/O Interface - External

- 4-pin Mini DIN +12V DC-in
- Power-on / Storage LEDs
- ATX power-on SW
- DVI-I
- Line-out phone-jack
- Reset SW

I/O Interface - External

- Multi I/O port with pin-header for Audio output, Power-on / Storage LEDs, Power-on SW and Reset SW
- DC out connector to DC/DC converter

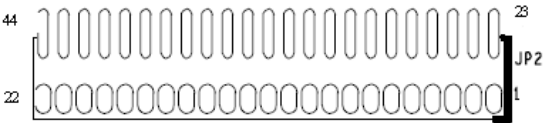
Connectors



Pin Definitions

DVI-I Connector and Miscellaneous Signals

JP2



Pin	Definition	Pin	Definition
1	GFX_TX2N	2	GFX_TX2P
3	GND	4	GFX_TX1N
5	GFX_TX1P	6	GND
7	GFX_TX4N	8	GFX_TX4P
9	GND	10	GFX_TX6N
11	GFX_TX6P	12	DVI_5V
13	DVI2_HPD	14	MASTER_RST#
15	PWRBT_SW	16	PWR_LED_P
17	HD_LED_P	18	+5V_ATX
19	GND	20	LINE1_OUT_L
21	+5VALW_ATX	22	LED_WLAN_P
23	GFX_TX0N	24	GFX_TX0P
25	GND	26	GFX_TX5N
27	GFX_TX5P	28	GND
29	GFX_TX3N	30	GFX_TX3P
31	GND	32	DVI_CLK
33	DVI_DATA	34	GND
35	GND	36	GND

Pin	Definition	Pin	Definition
37	GND	38	PWR_LED_N
39	HD_LED_N	40	+3.3V_ATX
41	GND	42	LINE1_OUT_R
43	+3.3V_ATX	44	LED_WLAN_N

Audio Out

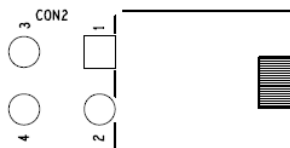
CN3



Pin	Definition	Pin	Definition
1	GND	2	LOUT_R3
3	NC	4	NC
5	LOUT_L3		

DC Power

CON2



Pin	Definition	Pin	Definition
1	+12V_ATX	2	+12V_ATX
3	GND	4	GND

DVI

CN2



Pin	Definition	Pin	Definition
1	GFX_TX0N	2	GFX_TX0P
3	GND	4	GFX_TX5N
5	GFX_TX5P	6	CRT_CLK
7	CRT_DATA	8	NC
9	GFX_TX1N	10	GFX_TX1P
11	GND	12	GFX_TX6N
13	GFX_TX6P	14	DVI_5V
15	GND	16	DVI_HPDP
17	GFX_TX2N	18	GFX_TX2P
19	GND	20	GFX_TX4N
21	GFX_TX4P	22	GND
23	GFX_TX3P	24	GFX_TX3N
C1	NC	C2	NC
C3	NC	C4	NC
C5A	GND	C5B	GND

WLAN LED

JP1

Pin	Definition	Pin	Definition
1	LED_WLAN_N	2	LED_WLAN_P

Power In 12V

CN4

Pin	Definition	Pin	Definition
1	VCC12V	2	GND

CHAPTER 3: SYSTEM SETUP

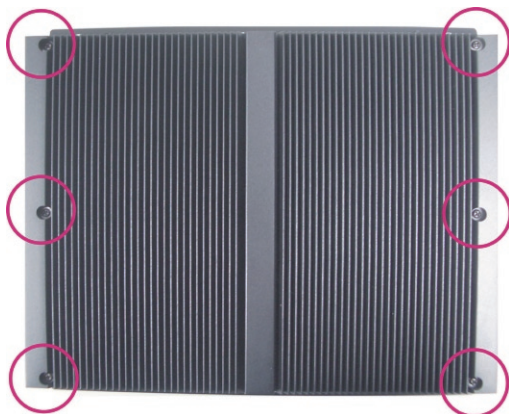
This chapter provides information on how to install the DIMM, CPU and storage devices.

Removing the Chassis Cover



Prior to removing the chassis cover, make sure the unit's power is off and disconnected from the power sources to prevent electric shock or system damage.

1. The screws on the cover are used to secure the cover to the chassis.



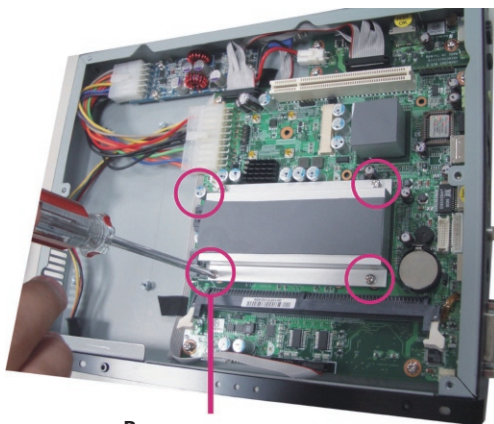
Top View of the System

2. Remove these screws and put them in a safe place for later use. Lift the cover upward then remove it from the chassis.



Installing the CPU

1. Remove the screws that secure the heat sink to the board. Save these screws for later use.

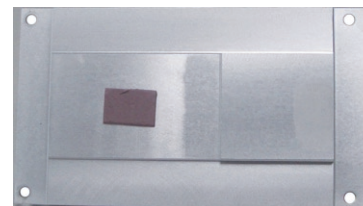


Remove screw



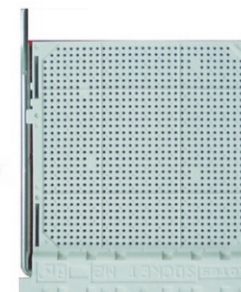
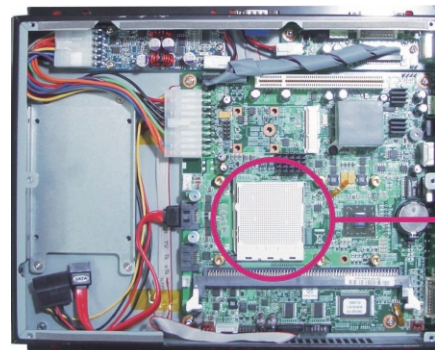
- Make sure all power cables are unplugged before you install the CPU.
- The CPU socket must not come in contact with anything other than the CPU. Avoid unnecessary exposure.

2. Now remove the heat sink to access the CPU socket.



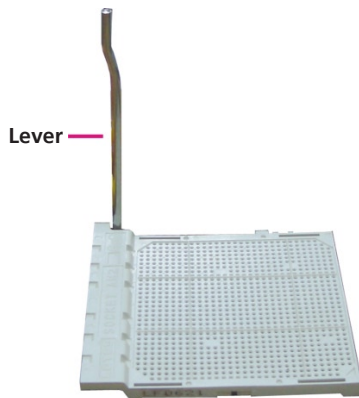
Bottom Side of the Heat Sink

3. The CPU socket is readily accessible after you have removed the heat sink.

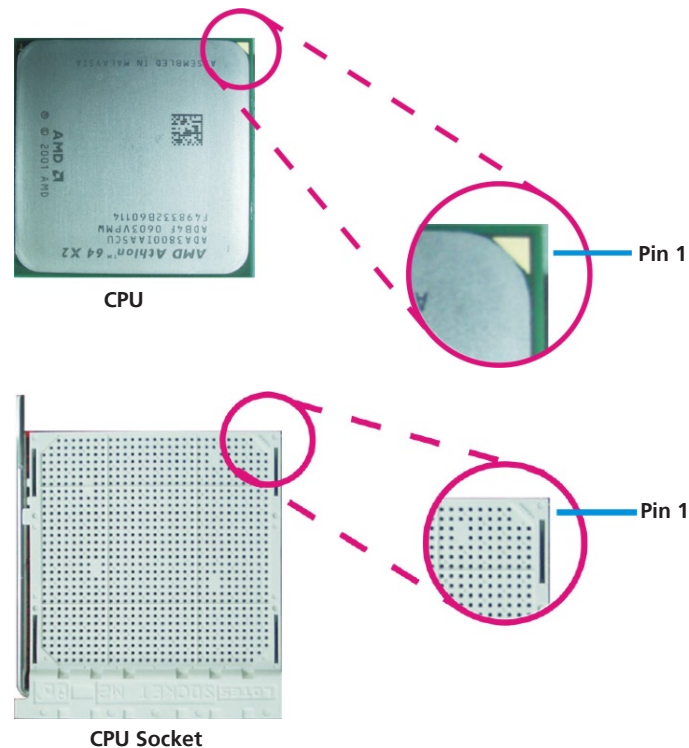


CPU Socket

4. Unlock the socket by pushing the lever sideways, away from the socket, then lifting it up to a 90° angle. Make sure the lever is lifted to at least this angle otherwise the CPU will not fit in properly.



5. Position the CPU above the socket. The gold mark on the CPU must align with pin 1 of the CPU socket (refer to the enlarged image) shown below.

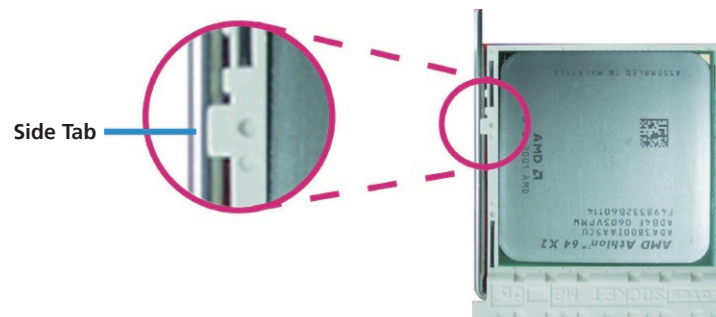


Handle the CPU by its edges and avoid touching the pins.

6. Position the CPU above the socket then insert it into the socket until it is seated in place. The CPU will fit in only one orientation and can easily be inserted without exerting any force.

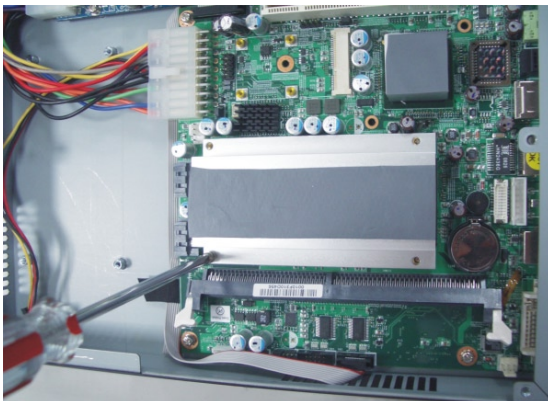


7. Once the CPU is in place, push down the lever to lock the socket. The lever should click on the side tab to indicate that the CPU is completely secured in the socket.



Do not force the CPU into the socket. Forcing the CPU into the socket may bend the pins and damage the CPU.

8. Replace the heat sink using the screws you removed earlier.



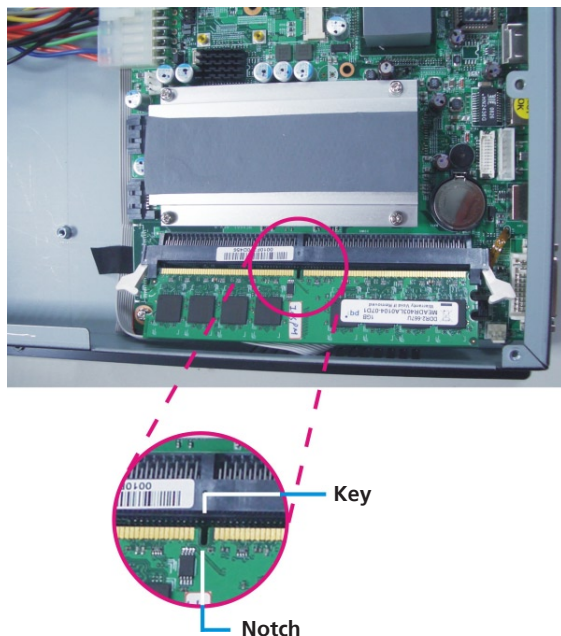
Installing a DIMM

The system board supports DDR2 533/667 DIMMs. When installing DIMMs, NEXCOM recommends using the same brand and type of memory modules.

1. Locate the DIMM socket on the board.
2. Push the ejector tab which are at the ends of the socket outward. This indicates that the socket is unlocked.

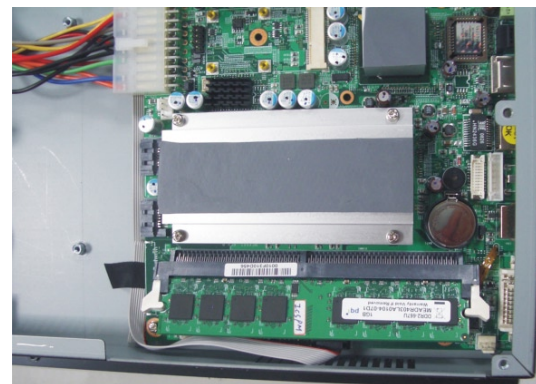


3. Note how the module is keyed to the socket. Grasping the module by its edges, align the module with the socket so that the “notch” in the module aligned with the “key” on the socket. The key ensures the module can be plugged into the socket in only one direction.



4. Insert the module into the socket at an approximately 30 degrees angle. Apply firm even pressure to each end of the module until it slips down into the socket. The contact fingers on the edge of the module will almost completely disappear inside the socket.

Push the module down. The ejector tabs at the ends of the socket will automatically snap into the locked position to hold the module in place.



Installing a SATA Hard Drive

1. The drive bay included in the package is used to hold a SATA hard drive.



2. Place the SATA hard drive onto the drive bay. Align the mounting holes that are on the sides of the SATA drive with the mounting holes on the drive bay then use the provided screws to secure the drive in place.



3. Place the SATA drive into the chassis then use the provided screws to secure the drive bay to the chassis.



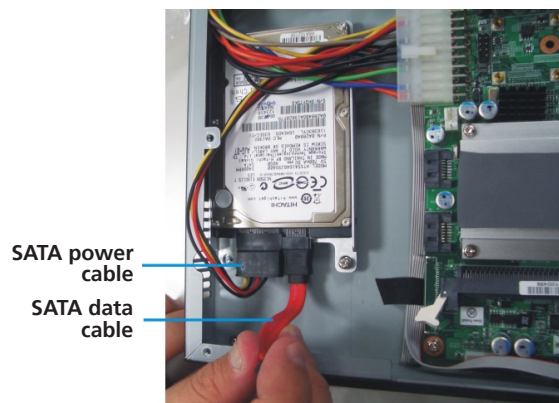
4. Connect one end of the SATA data cable to the SATA connector that is on the system board.



5. Connect the other end of the SATA data cable to the SATA connector at the rear of the SATA drive.



6. Connect the SATA power cable to the power connector at the rear of the SATA drive.



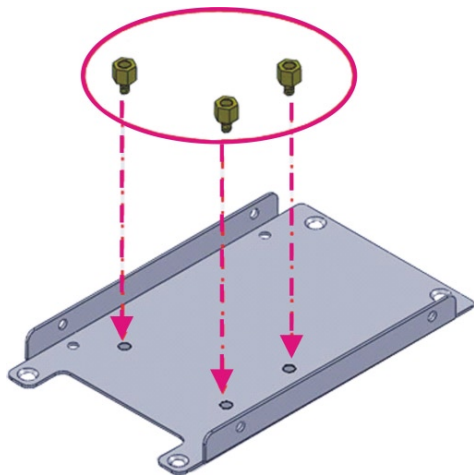
Installing a CompactFlash Card (optional)

Instead of using a SATA drive, the system provides the option of using a CompactFlash card by installing the optional SATA-to-CF converter board.

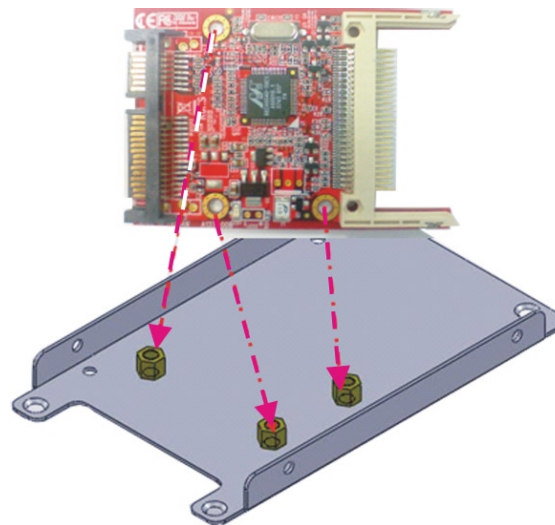
1. The drive bay included in the package is used to hold the SATA-to-CF converter board.



2. Attach the 3 copper studs (posts) on the drive bay as shown in the illustration below.

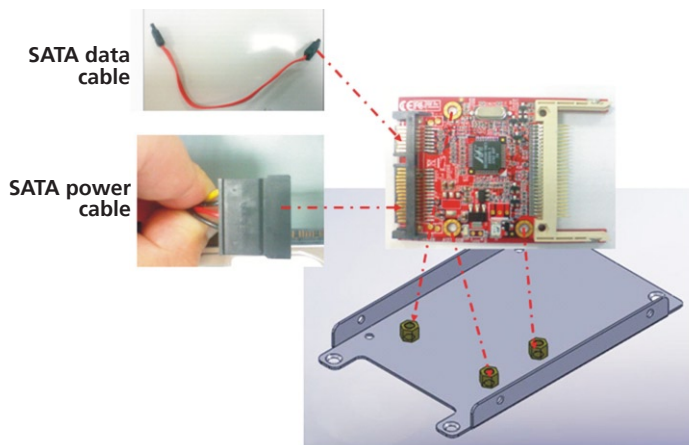


3. Place the SATA-to-CF converter board onto the drive bay then use the provided screws to secure the board to the bay.



4. Connect one end of the SATA data cable to the SATA connector that is on the system board and the other end to the converter board.

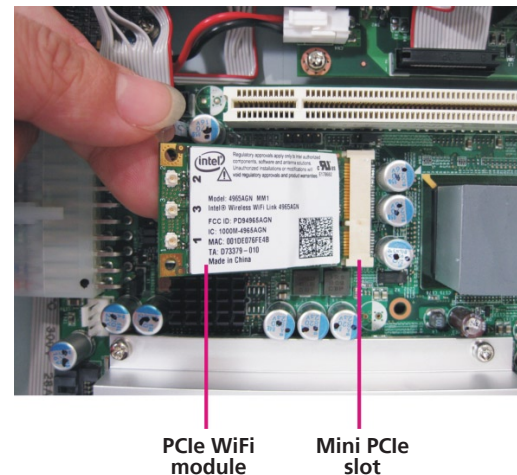
Connect the SATA power cable to the power connector of the converter board.



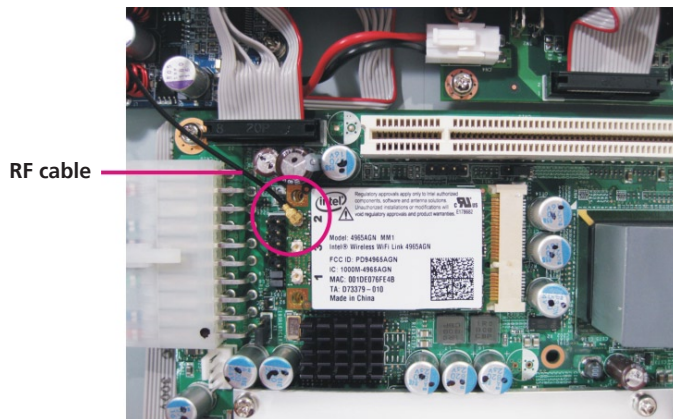
5. With the CompactFlash card's label facing up, insert the CF card into the slot until it is completely seated in the slot.

Installing the WiFi Module

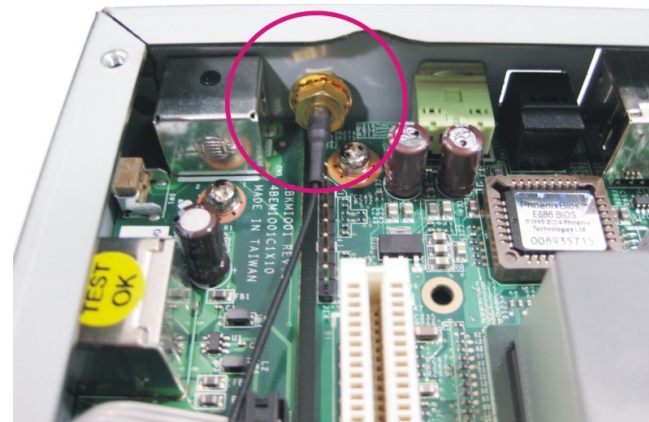
1. Insert the PCIe WiFi module into the Mini PCIe slot.



2. Attach one end of the RF cable onto the WiFi module.

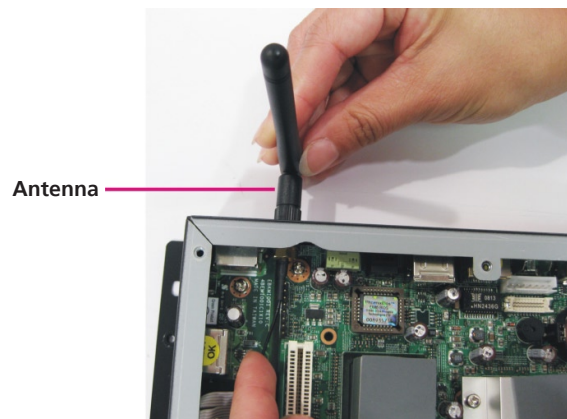


3. Attach the other end of the cable to the WiFi antenna hole located at the side panel of the chassis.

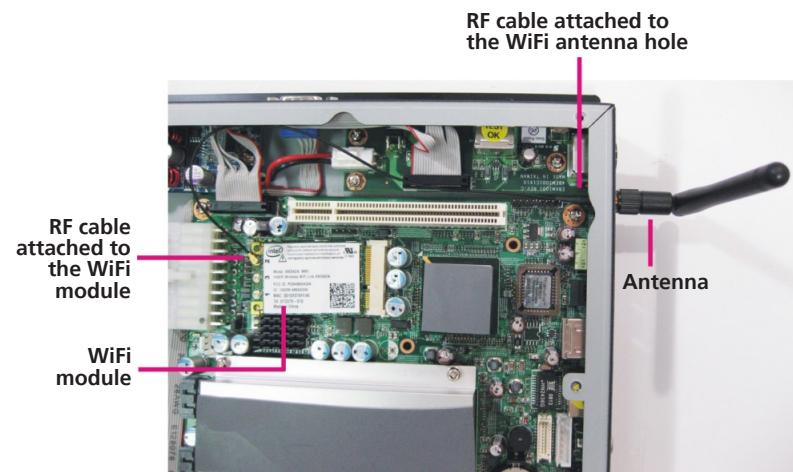


Internal view of the side panel

4. Now connect an external antenna to the WiFi antenna jack.

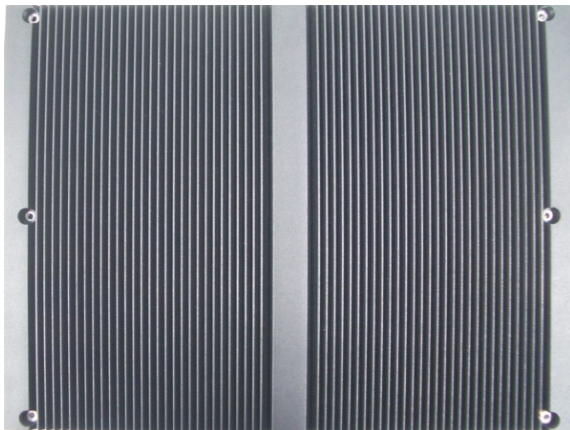


5. The photo below shows the completed WiFi antenna setup.



Replacing the Chassis Cover

1. Replace the chassis cover.



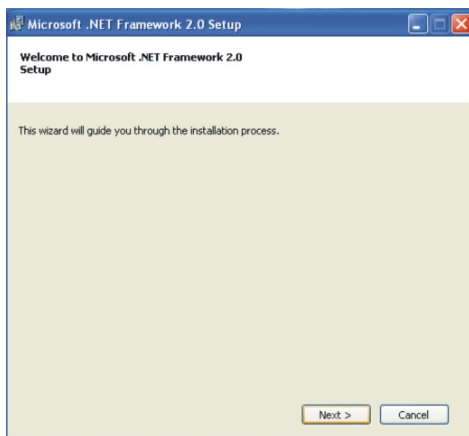
2. Secure the cover to the chassis using the screws you removed earlier.



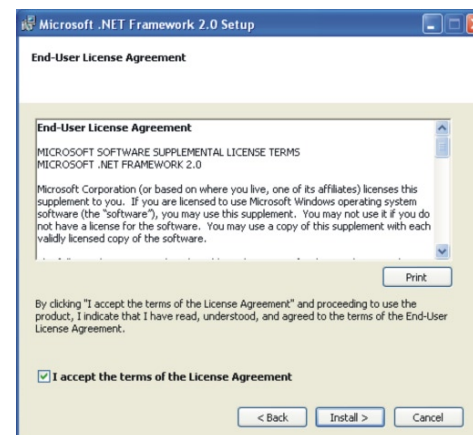
CHAPTER 4: DRIVER INSTALLATION

Microsoft .NET Framework 2.0

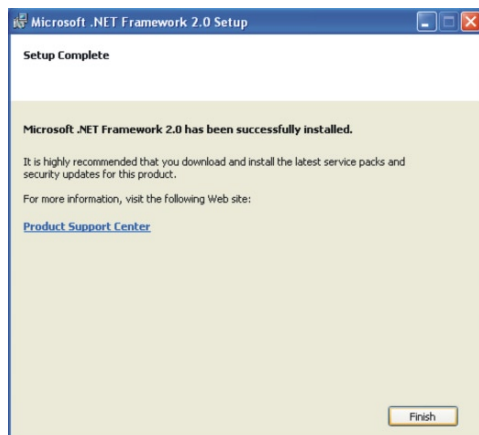
1. Insert the provided CD into a CD-ROM drive.
2. Double-click the Setup file to install the driver.
3. Setup is now ready to install the driver. Click Next.



4. Read the license agreement then click "I accept the terms of the License Agreement". Click Install.

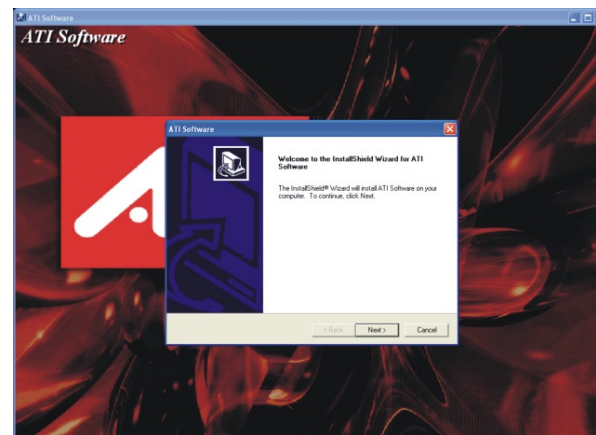


5. Follow the prompts on the screen to complete installation. After completing installation, click Finish.

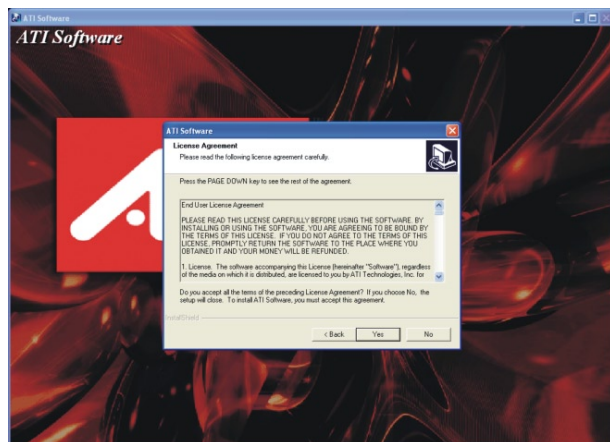


ATI Display Driver

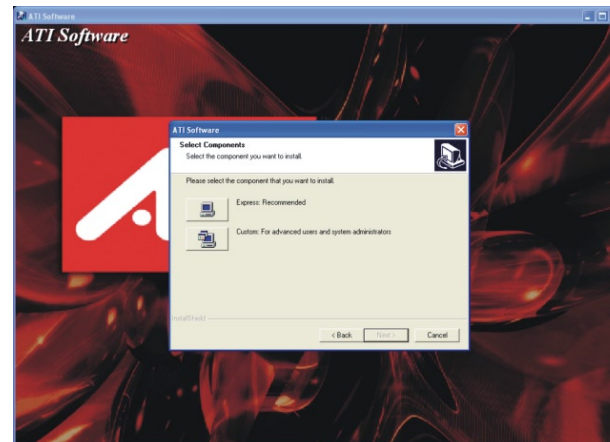
1. Insert the provided CD into a CD-ROM drive.
2. Double-click the Setup file to install the driver.
3. Setup is now ready to install the driver. Click Next.



4. Read the license agreement then click Yes.



5. Select the component you want to install then click Next.



6. The following dialog box will appear. Click “Continue Anyway”.

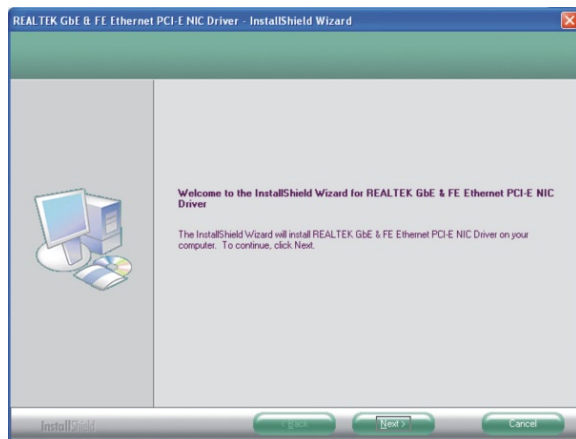


7. Setup has finished installing the selected components to your system. Click “Yes, I want to restart my computer now” then click Finish. Restarting the system will allow the new driver installation to take effect.

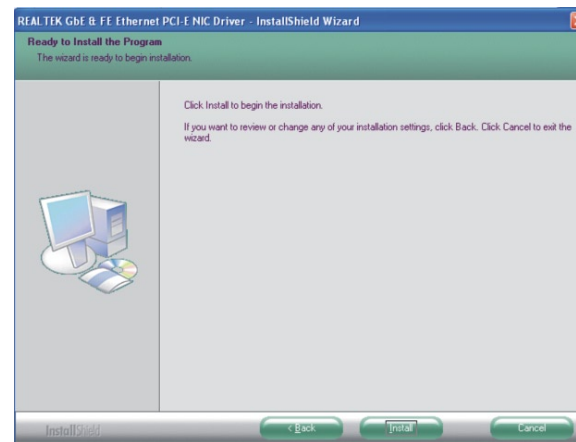


Realtek LAN Driver

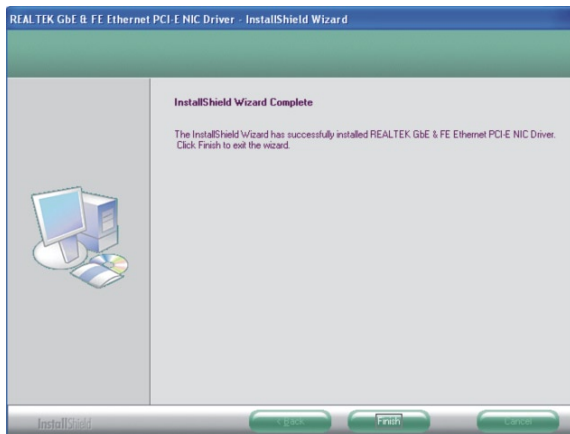
1. Insert the provided CD into a CD-ROM drive.
2. Double-click the Setup file to install the driver.
3. Setup is now ready to install the driver. Click Next.



4. Click Install to begin the installation.

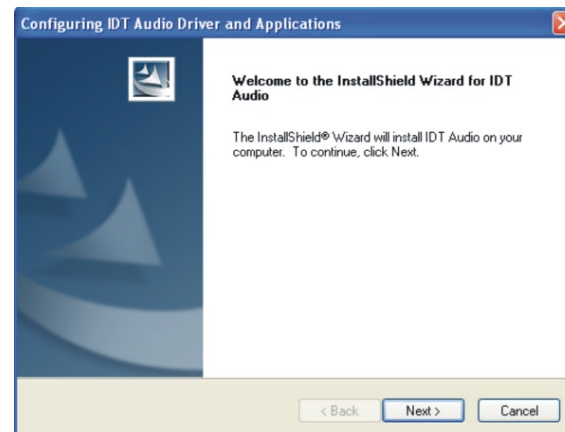


5. After completing installation, click Finish to exit setup.

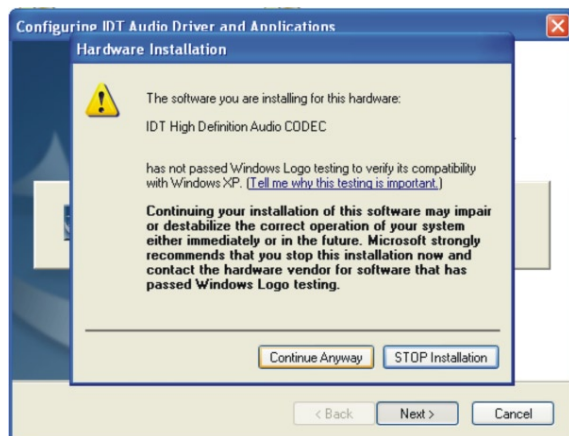


IDT Audio Driver

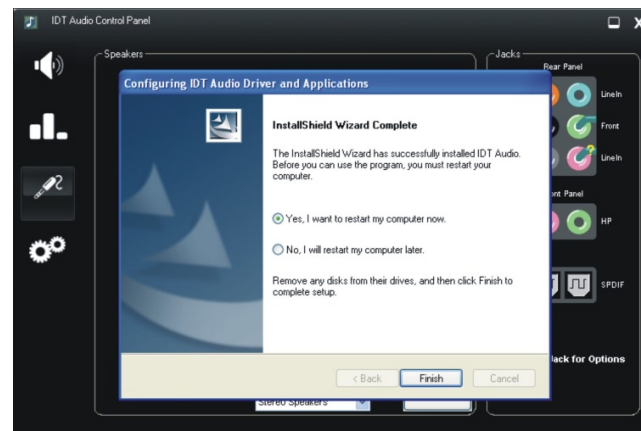
1. Insert the provided CD into a CD-ROM drive.
2. Double-click the Setup file to install the driver.
3. Setup is now ready to install the driver. Click Next.



4. The following dialog box will appear. Click “Continue Anyway”.



5. Setup has finished installing the driver. Click “Yes, I want to restart my computer now” then click Finish. Restarting the system will allow the new driver installation to take effect.



APPENDIX A: POWER CONSUMPTION

Power Type	+5V and 5VSB	+3.3V	+12V
Consumed watts	60.48	9.63	22.92
Consumed currents (Item A)	12.1	1.96	1.91
Actually required currents (Item A/0.85)	14.24	2.31	2.24